

Ad hoc query designers can combine data from [one universe](#) or [multiple universes](#) using a process called Merged Dimensions.

Why/When Would I Use a Merged Dimension?

You may determine a Merged Dimension is necessary when:

Measures need to be calculated at a different granularity in your ad hoc query.

- ✓ For example, you want to sum the values of all Time Taken in a month and add the Distinct Employee Count as of the end of the month.
- ✓ If you include Time Taken and Distinct Employee Count without using a Merged Dimension, it will sum all Time Taken for each day in the month and sum the Distinct Employee Count for each day in the month – resulting in an inflated Distinct Employee Count.
- ✓ Using a Merged Dimension will allow you to sum the Time Taken for the month and get the Distinct Employee Count as of the end of the month.

A field or measure is not available in the current universe but is available in another universe.

- ✓ For example, Job (EE) is not available in the Staffing Assignments universe but it is available in the Headcount and Personnel Actions universe.
- ✓ Using a Merged Dimension will allow you to get filled and vacant position count information from the Staffing Assignments universe and get the employee's Job information for filled positions from the Headcount and Personnel Actions universe.

Following are some tips to remember when working with Merged Dimensions.

Object Information	Example
✓ Merged Dimension data values must have the same data type.	Do not merge a number data type with a text data type.
✓ Merged Dimension data values must have the same format.	Do not merge a Calendar Month date (format MM) with a Calendar Year date (format YYYY).
✓ Merged Dimension data values are case sensitive. If the merged values contain a mix of lower-case and upper-case, they will be displayed as separate values.	Sample-data and SAMPLE-DATA will be displayed as two separate values.
✓ Variables can be created to associate Merged Dimensions when using multiple universes.	Job (EE) is not available in the Staffing Assignments universe. Create a variable to associate Job (EE) from the Headcount and Personnel Actions universe with the Position Code from the Staffing Assignments universe.

Creating a Merged Dimension Using One Universe

The following example shows how you can create a Merged Dimension using a single universe - Time and Labor - that includes an employee's Planned Work Time and Time Taken measures aggregated at the monthly level and the employee's Age (Years) measure as of the last day of the month.

Without creating a Merged Dimension:

- ✓ Age (Years) measure will aggregate for each day of the month, along with the Planned Work Time and Time Taken. See Example 1 below.
- ✓ Planned Work Time and Time Taken will not aggregate if you add the Last Calendar Day of Month Values pre-defined filter to get the Age (Years) measure as of the last day of the month.

Example 1: Without a Merged Dimension, Planned Work Time, Time Taken, and Age (Years) are all aggregated at the monthly level.

Business Area Code (EE)	Business Area (EE)	Organizational Unit Code	Organizational Unit	Personnel Number	Planned Work Time	Time Taken	Age (Years)
3000	Dept of Social & Health Serv.	30003536	DDA DDD R02		176	11	2,257.6
3000	Dept of Social & Health Serv.	30003536	DDA DDD R02		176	8.5	2,622
3000	Dept of Social & Health Serv.	30003536	DDA DDD R02		176		1,824
3000	Dept of Social & Health Serv.	30003536	DDA DDD R02		177	14.5	1,866

- ✓ To get an accurate Age (Years) measure and an accurate Planned Work Time and Time Taken measure, create a Merged Dimension and include the Last Calendar Day of Month pre-defined filter for Age (Years). See Example 2 below.

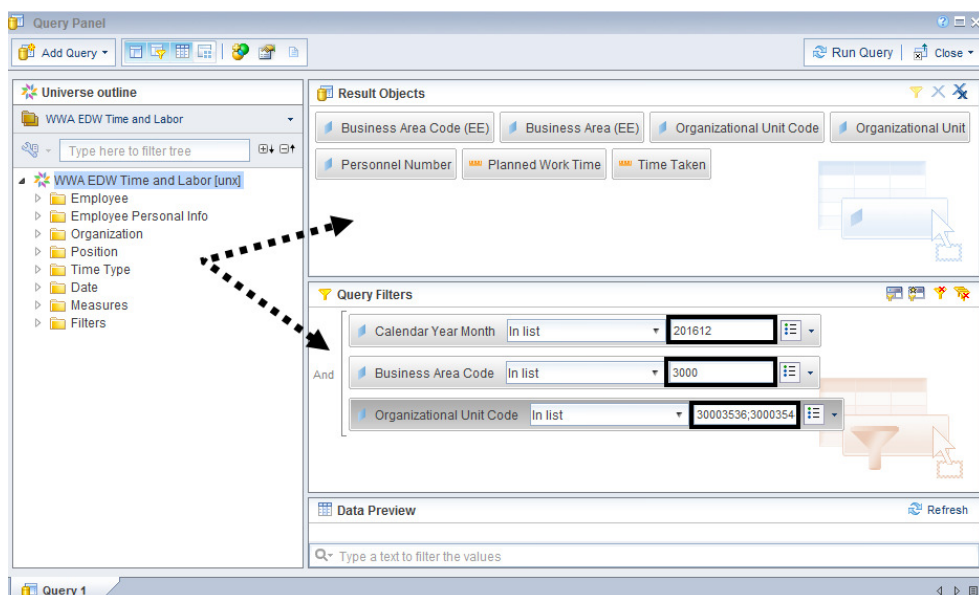
Example 2: Using a Merged Dimension, Age (Years) is filtered to the Last Calendar Day of Month while Planned Work Time and Time Taken are aggregated for the month.

Business Area Code (EE)	Business Area (EE)	Organizational Unit Code	Organizational Unit	Personnel Number	Planned Work Time	Time Taken	Age (Years)
3000	Dept of Social & Health Serv.	30003536	DDA DDD R02		176	11	66.4
3000	Dept of Social & Health Serv.	30003536	DDA DDD R02		176	8.5	77.2
3000	Dept of Social & Health Serv.	30003536	DDA DDD R02		176		58.9

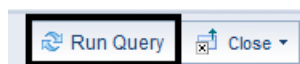
Create Initial Query

1. Add: **Object(s)** from the universe into the Result Objects area.
→ Do not include Age (Years) in the initial query. It will be added to the second (duplicate) query in a later step.
2. Add: **Object(s)** from the universe into the Query Filters area.
3. Input: **Filter Values**.

In this example, we create the initial query in the Time and Labor universe.



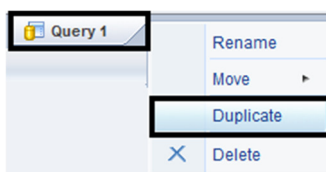
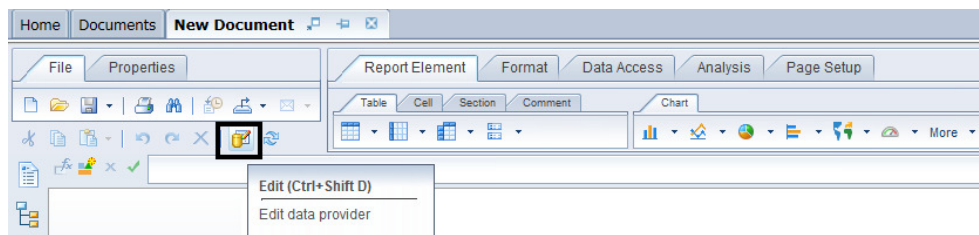
4. Select: **Run Query**.
→ WebI will display the query results in the Report Panel.



Business Area	Business Area	Organization	Organization	Personnel N	Planned Wor	Time Taken
3000	Dept of Social	30003536	DDA DDD R0		176	11
3000	Dept of Social	30003536	DDA DDD R0		176	8.5
3000	Dept of Social	30003536	DDA DDD R0		176	
3000	Dept of Social	30003536	DDA DDD R0		177	14.5
3000	Dept of Social	30003536	DDA DDD R0		176	29.3

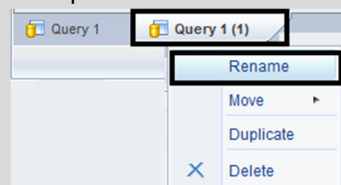
Create Duplicate Query

1. Select: **Edit Data Provider**.
→ WebI will display the initial query panel.
2. Right-click the query tab at the bottom of the query panel.
3. Select: **Duplicate**.
→ WebI will create a duplicate query.

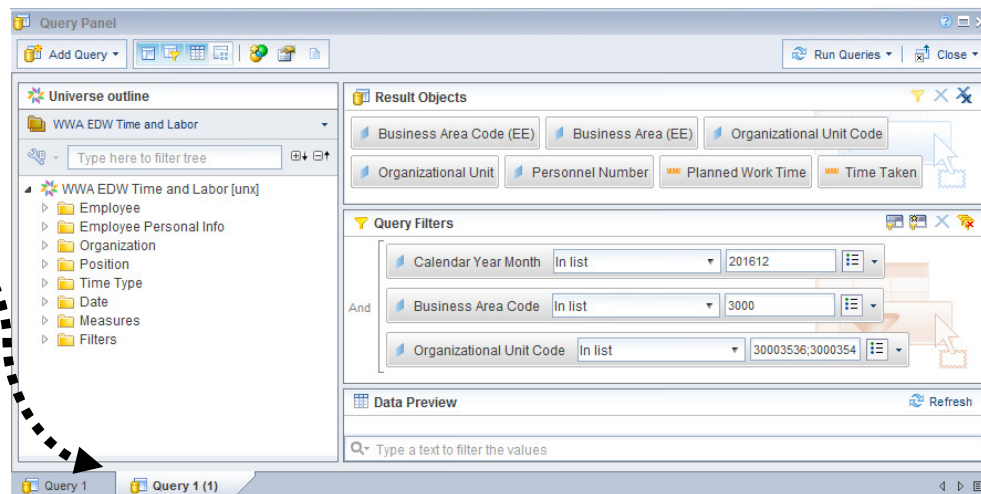


4. Right-click the query tabs to rename the queries (optional).

→ This helps to avoid confusion when you have multiple queries or data providers.



In this example, we have two queries: Query 1 and Query 1 (1).



Modify Duplicate Query

For these next steps, ensure you are in the duplicate query.

1. Remove: **Object(s)** from the Result Objects area.

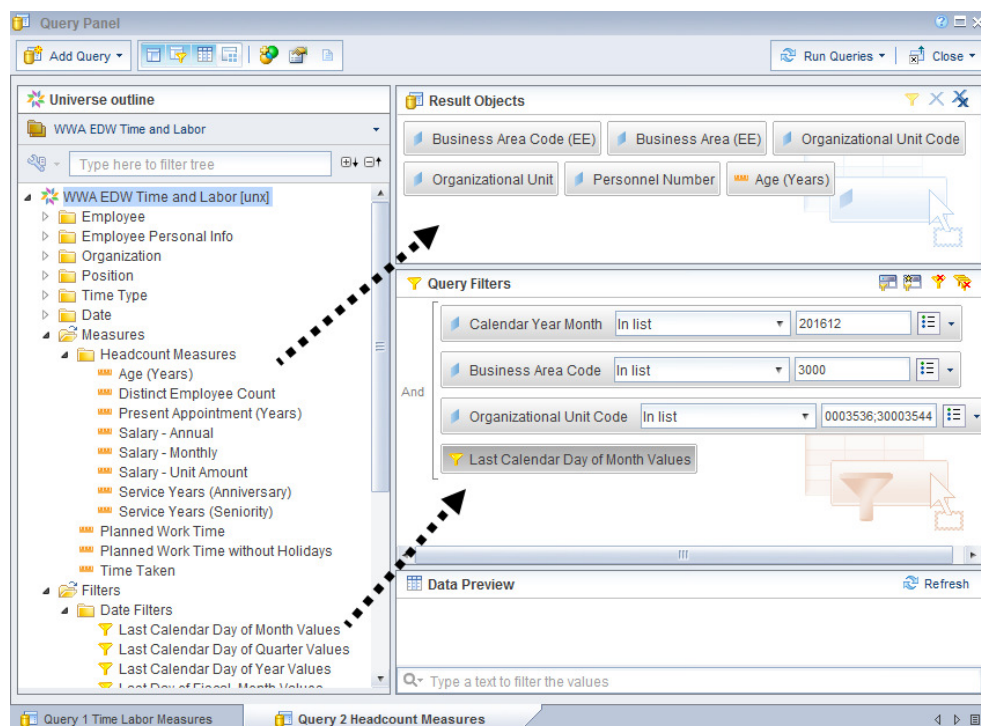
→ Select original measures and drag off or select **Remove**

2. Add: **Object** from the Headcount Measures into the Result Objects area.

3. Add: **Last Calendar Day of Month Values** from the Date Filters into the Query Filters area.

→ This will ensure the headcount measure will be based on the pre-defined filter for Last Calendar Day of Month.

In this example, we removed **Planned Work Time** and **Time Taken** and added **Age (Years)** to Results Objects, and added **Last Calendar Day of Month Values** to the Query Filters.



Run Queries

1. Select: **Run Queries.**

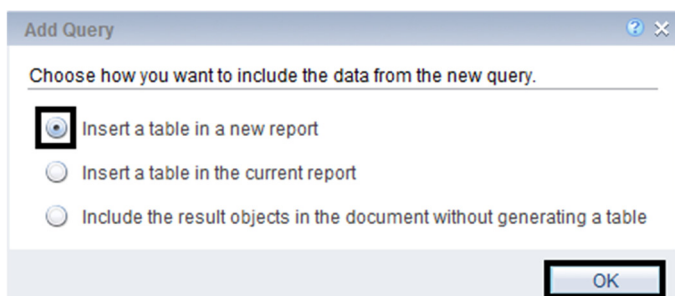
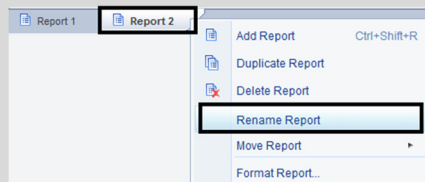
→ Webl will display options for displaying the data.

2. Select: **Insert a table in a new report.** This is the default selection.

3. Select: **OK.**

→ The duplicate query with the headcount measure will display as Report 2

→ Right-click the report tabs to rename your reports. This helps to avoid confusion when you have multiple reports or data providers.



In this example, we have two reports: Report 1 and Report 2.

Business Area	Business Area	Organization	Organization	Personnel N	Age (Years)
3000	Dept of Social	30003536	DDA DDD R02		66.4
3000	Dept of Social	30003536	DDA DDD R02		77.2
3000	Dept of Social	30003536	DDA DDD R02		58.9
3000	Dept of Social	30003536	DDA DDD R02		50.5
3000	Dept of Social	30003536	DDA DDD R02		53.2

Merge Dimensions

1. Select: **Available Objects.**

→ Webl will display the available objects for both queries.

2. Select: **Dimensions.** Use the Shift key or Ctrl key to select set of dimensions.

3. Right-click the selected dimensions to display the merge option.

4. Select: **Merge.**

Report 1 Time Labor Measures

Business Area Code (EE)	Business Area (EE)	Organizational Unit Code	Organizational Unit	Personnel Number	Planned Work Time	Time Taken
3000	Dept of Social	30003536	DDA DDD R02		176	11
3000	Dept of Social	30003536	DDA DDD R02		176	8.5
3000	Dept of Social	30003536	DDA DDD R02		176	
3000	Dept of Social	30003536	DDA DDD R02		177	14.5
3000	Dept of Social	30003536	DDA DDD R02		176	29.3

Business Area Code (EE)

3000
3000
3000
3000

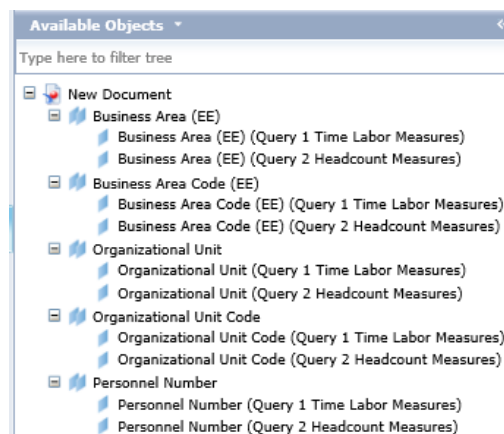
→ WebI will display the merged dimensions in the Available Objects area.

→ Repeat these steps for each set of dimensions that need to be merged.

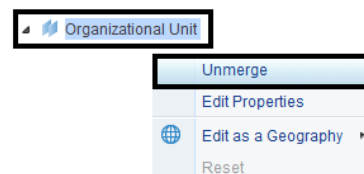
→ Dimensions must have the same data type. For example, do not merge Organizational Unit with Organizational Unit Code.

→ Dimension dates must have the same format. For example, do not merge Calendar Month with Calendar Year.

In this example, we have five sets of merged dimensions based on the initial query and the duplicate query.



To unmerge dimensions, right-click the merged dimension and select Unmerge.



Add Objects to Report

1. Add: **Object(s)** into the report workspace.

→ It's usually faster to use the report created from the initial query because most of the objects are already included.

→ If you create a new report (Ctrl+Shift+R), you will need to add objects to the empty report workspace.

→ Rename Report 1, if necessary.

In this example, we added Age (Years) next to Time Taken.

Business Area Code (EE)	Business Area (EE)	Organizational Unit Code	Organizational Unit	Personnel Number	Planned Work Time	Time Taken	Age (Years)
3000	Dept of Socia	30003536	DDA DDD R02		176	11	66.4
3000	Dept of Socia	30003536	DDA DDD R02		176	8.5	77.2
3000	Dept of Socia	30003536	DDA DDD R02		176		58.9
3000	Dept of Socia	30003536	DDA DDD R02		177	14.5	50.5
3000	Dept of Socia	30003536	DDA DDD R02		176	29.3	53.2
3000	Dept of Socia	30003536	DDA DDD R02		176	17	54.7
3000	Dept of Socia	30003536	DDA DDD R02		177	10	67.4

Creating a Merged Dimension Using Two Universes

The following example shows how you can create a Merged Dimension using two universes – Staffing Assignments and Headcount and Personnel Actions - to compare the job assigned to the position with the job assigned to the employee.

- ✓ Since Job (EE), Job Code (EE) and Job Class Abbr (EE) are not available in the Staffing Assignments universe it is necessary to create a Merged Dimension between the Staffing Assignments universe and the Headcount and Personnel Actions universe.

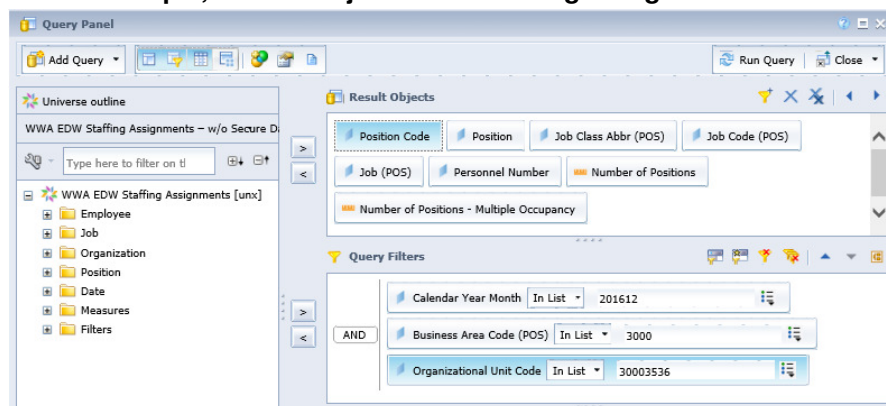
When creating a Merged Dimension to include fields that are not present in both universes, you must establish a link between the two universes by creating a variable for the missing data element and associating that variable with a shared data element that is present in both universes.

- ✓ The variable allows you to lookup the value of Job (EE) in the Headcount and Personnel Actions universe by using the Position Code that is present in both universes. Instructions for creating and associating variables are included in the example below.

Create Query

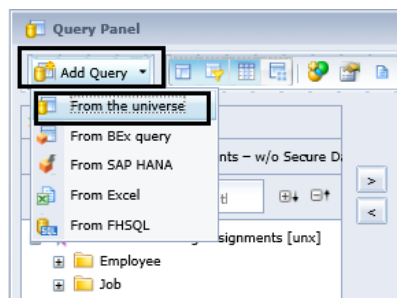
1. Add: **Object(s)** from the universe into the Result Objects area.
2. Add: **Object(s)** from the universe into the Query Filters area.
3. Input: **Filter Values.**

In this example, we add objects from Staffing Assignments universe.

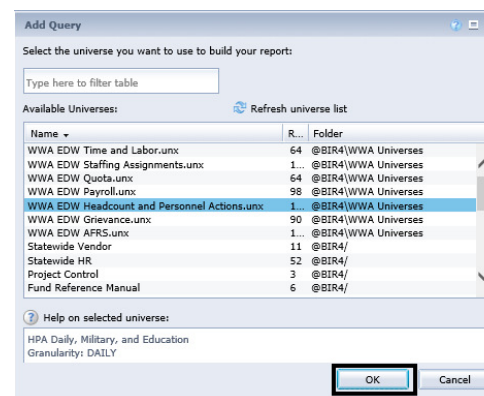


Add Query

1. Select: **Add Query.**
2. Select: **From Universe.**
→ WebI will display a list of available universes based on your security/permissions. All WWA Universes are prefixed with "WWA".
3. Select: **Universe**
4. Select: **OK**
→ A new Query Panel will open in the selected universe.



In this example, we select the WWA EDW Headcount and Personnel Actions universe

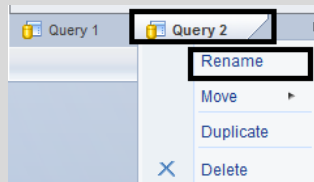
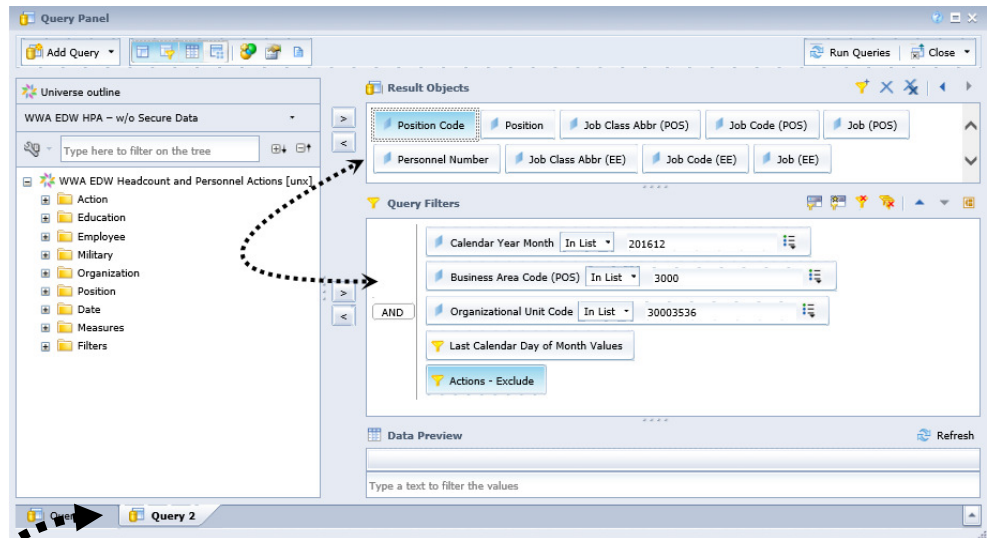


Create New Query

1. Add: **Object(s)** from the universe into the Result Objects area.
2. Add: **Object(s)** from the universe into the Query Filters area.
3. Input: **Filter Values.**

→ For accurate employee counts, add the **Actions - Exclude** pre-defined filter in the Headcount and Personnel Actions universe to narrow the focus to records that are not actions.

→ Right-click the query tab to rename your query. This helps to avoid confusion when you have multiple queries or data providers.



Run Queries

1. Select: **Run Queries.**



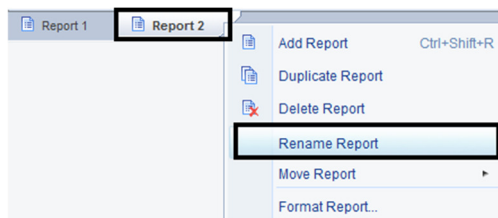
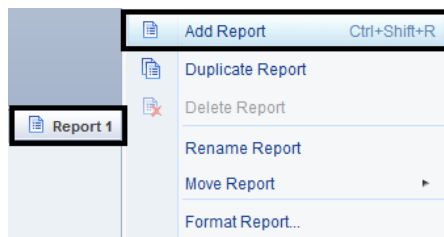
In this example, the queries are displayed in two tables on one report.

Report 1

Position Code	Position	Job Class Abbr (POS)	Job Code (POS)	Job (POS)	Personnel Number	Number of Positions	Number of Positions - Multiple Occupancy	Position Code	Position	Job Class Abbr (POS)	Job C (POS)
70024327	DEVELOPMENTAL DISAB CASE/RES MGR	351U	50001064	DEVELOPMENTAL DISAB CASE/RES MGR		1	0	70024327	DEVELOPMENTAL DISAB CASE/RES MGR	351U	50001
70099931	CUSTOMER SERVICE SPECIALIST 2	102B	50000292	CUSTOMER SERVICE SPECIALIST 2		1	0	70099931	CUSTOMER SERVICE SPECIALIST 2	102B	50000
70116967	DEVELOPMENTAL DISAB CASE/RES MGR	351U	50001064	DEVELOPMENTAL DISAB CASE/RES MGR		1	0	70116967	DEVELOPMENTAL DISAB CASE/RES MGR	351U	50000
70116968	DEVELOPMENTAL DISAB CASE/RES MGR	351U	50001064	DEVELOPMENTAL DISAB CASE/RES MGR		1	0	70116968	DEVELOPMENTAL DISAB CASE/RES MGR	351U	50000
70116969	DEVELOPMENTAL DISAB CASE/RES MGR	351U	50001064	DEVELOPMENTAL DISAB CASE/RES MGR		1	0	70116969	DEVELOPMENTAL DISAB CASE/RES MGR	351U	50000
70118043	DEVELOPMENTAL DISAB CASE/RES MGR	351U	50001064	DEVELOPMENTAL DISAB CASE/RES MGR		1	0	70120093	CUSTOMER SERVICE SPECIALIST 1	102A	50000
70120093	CUSTOMER SERVICE SPECIALIST 1	102A	50000289	CUSTOMER SERVICE SPECIALIST 1		1	0	70120488	DEVELOPMENTAL DISAB CASE/RES MGR	351U	50000

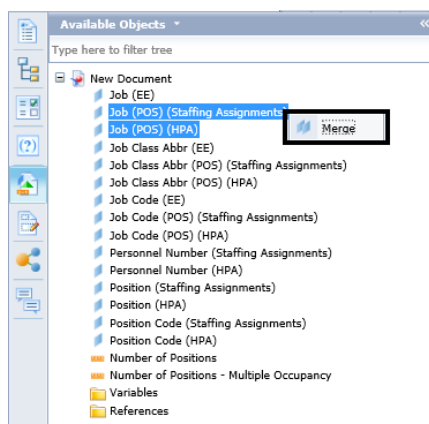
Add New Report

1. Right-click the report tab at the bottom of the report to display the add report option.
2. Select: **Add Report**.
→ Webl will display the available objects in a new report workspace.
3. Right-click the new report tab to rename your report.
4. Select: **Rename Report**.
→ This helps to avoid confusion when you have multiple reports or data providers.

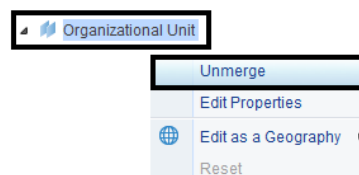


Merge Dimensions

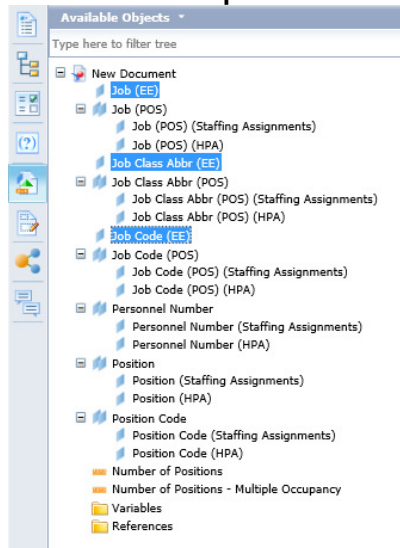
1. Select: **Dimensions**. Use the Shift key or Ctrl key to select set of dimensions to be merged.
2. Right-click the selected dimensions to display the merge option.
3. Select: **Merge**.
→ Repeat these steps for each set of dimensions that need to be merged.
→ Dimensions must have the same data type. For example, do not merge Position Code with Position.
→ Dimension dates need to have the same format. For example, do not merge Calendar Month with Calendar Year.



To unmerge dimensions, right-click the merged dimension and select Unmerge.



Job (EE), Job Class Abbr (EE) and Job Code (EE) cannot be merged since there are no compatible fields in the Staffing Assignments universe.



See [Create Variable to Associate Objects](#) below to merge these fields with the Staffing Assignments universe.

Create Variable to Associate Objects

Create a variable for a field that is not present in both universes (such as Job (EE)) and associate it with a field that is present in both universes (such as Position Code). Associating Job (EE) with Position Code merges the two universes based on the Position Code. The variable will return the value of Job (EE) based on the Position Code.

1. Right-click the **Variables** Folder in the Available Objects area to display the new variable option.

2. Select: **New**.

3. Input: **Name**. This will be the name for the variable.


4. Input: **Description**.

→ A description for the variable is helpful, especially if you have multiple variables or will be sharing the report with other WWA users.

5. Select: **Qualification**.

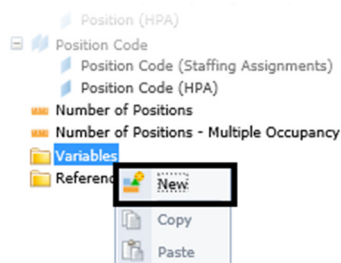
→ Use the Qualification dropdown to select Detail.

→ WebI will display additional options for associating the objects.

6. Use the  ellipsis to find and select an Associated dimension.

7. Select: **Associated dimension**.

8. Select: **OK**.



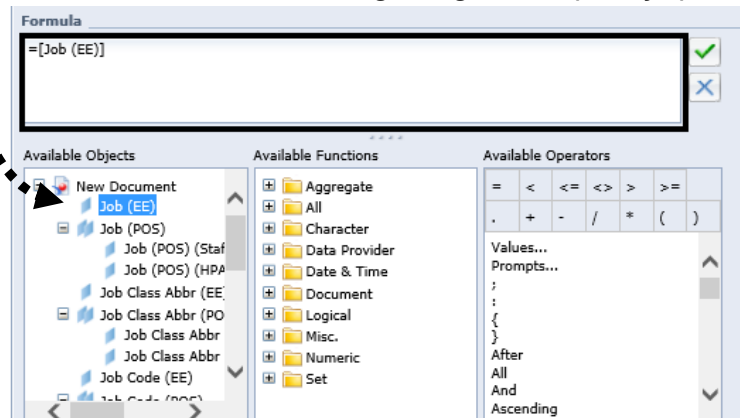
In this example, we select Detail because we want to associate Job (EE) from Headcount and Personnel Actions with the Position Code from Staffing Assignments universe.

In this example, we select the Position Code dimension from Staffing Assignments (Query 1).

9. Input: **Formula.**

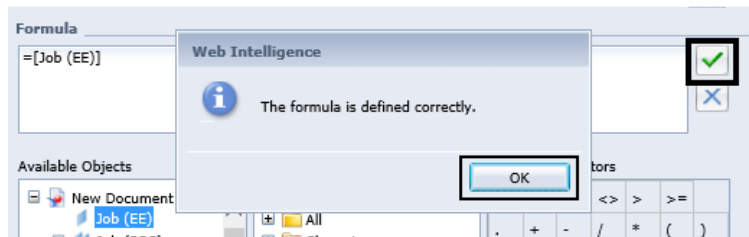
→ Double-click the dimension in the Available Objects area and WebI will input it into the formula area with a default value of equal to (=).

In this example, we input a formula for Job (EE) to associate it with Position Code dimension from Staffing Assignments (Query 1).



10. Select: ☒ checkbox icon to validate the formula.

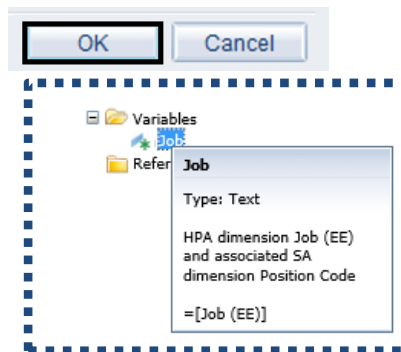
11. Select: **OK.**



12. Select: **OK.**

→ WebI will display the variable for the associated dimension in the available objects area.

→ Create a variable for each dimension that needs to be associated with another dimension.

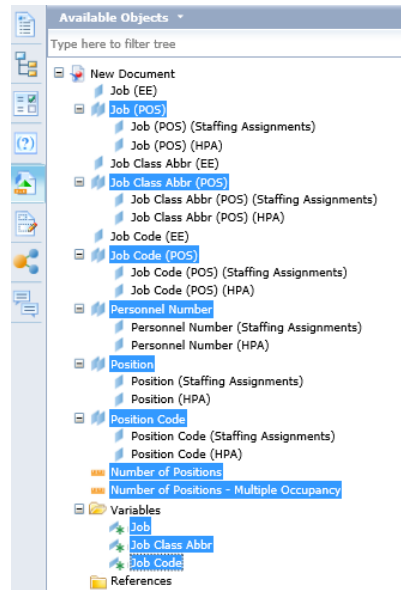


Add Objects To New Report

1. Add: **Object(s)** to the report workspace.

→ Use the Ctrl-key to select multiple objects in the order you want them to display in the report.

In this example, we select the six merged dimensions, the two measures and the three variables to add them to the report workspace.



The selected objects are displayed in the report and we can see employee detail, including employee Job detail, on positions that are filled.

Position Code	Position	Job Class Abbr (POS)	Job Code (POS)	Job (POS)	Number of Positions	Number of Positions - Multiple Occupancy	Personnel Number	Job Class Abbr	Job Code	Job
70024327	DEVELOPMENTAL DISAB CASE/RES MGR	351U	50001064	DEVELOPMENTAL DISAB CASE/RES MGR	1	0		351U	50001064	DEVELOPMENTAL DISAB CASE/RES MGR
70099931	CUSTOMER SERVICE SPECIALIST 2	102B	50000292	CUSTOMER SERVICE SPECIALIST 2	1	0		102B	50000292	CUSTOMER SERVICE SPECIALIST 2
70116967	DEVELOPMENTAL DISAB CASE/RES MGR	351U	50001064	DEVELOPMENTAL DISAB CASE/RES MGR	1	0		351U	50001064	DEVELOPMENTAL DISAB CASE/RES MGR
70116968	DEVELOPMENTAL DISAB CASE/RES MGR	351U	50001064	DEVELOPMENTAL DISAB CASE/RES MGR	1	0		351U	50001064	DEVELOPMENTAL DISAB CASE/RES MGR
70116969	DEVELOPMENTAL DISAB CASE/RES MGR	351U	50001064	DEVELOPMENTAL DISAB CASE/RES MGR	1	0		351U	50001064	DEVELOPMENTAL DISAB CASE/RES MGR
70118043	DEVELOPMENTAL DISAB CASE/RES MGR	351U	50001064	DEVELOPMENTAL DISAB CASE/RES MGR	1	0		351U	50001064	DEVELOPMENTAL DISAB CASE/RES MGR
70120093	CUSTOMER SERVICE SPECIALIST 1	102A	50000289	CUSTOMER SERVICE SPECIALIST 1	1	0		102A	50000289	CUSTOMER SERVICE SPECIALIST 1
70120488	DEVELOPMENTAL DISAB CASE/RES MGR	351U	50001064	DEVELOPMENTAL DISAB CASE/RES MGR	1	0		351U	50001064	DEVELOPMENTAL DISAB CASE/RES MGR
70120489	ADMINISTRATIVE ASSISTANT 3	105G	51000700	ADMINISTRATIVE ASSISTANT 3	1	0		105G	51000700	ADMINISTRATIVE ASSISTANT 3
70120609	DEVELOPMENTAL DISAB OUTSTATION MGR	351V	50001066	DEVELOPMENTAL DISAB OUTSTATION MGR	1	0		351V	50001066	DEVELOPMENTAL DISAB OUTSTATION MGR
70120610	DEVELOPMENTAL DISAB CASE/RES MGR	351U	50001064	DEVELOPMENTAL DISAB CASE/RES MGR	1	0		351U	50001064	DEVELOPMENTAL DISAB CASE/RES MGR
70120611	DEVELOPMENTAL DISAB ADMINISTRATOR	351X	50001076	DEVELOPMENTAL DISAB ADMINISTRATOR	1	0		351X	50001076	DEVELOPMENTAL DISAB ADMINISTRATOR
70120613	DEVELOPMENTAL DISAB CASE/RES MGR	351U	50001064	DEVELOPMENTAL DISAB CASE/RES MGR	1	0		351U	50001064	DEVELOPMENTAL DISAB CASE/RES MGR

In this example, Position Code 71026810 is an IT Specialist 3 (479K) but the employee is working as a Human Resource Consultant 3 (119G).

Position Code	Position	Job Class Abbr (POS)	Job Code (POS)	Job (POS)	Number of Positions	Number of Positions - Multiple Occupancy	Personnel Number	Job Class Abbr	Job Code	Job
71026805	HUMAN RESOURCE CONSULTANT 4	119H	50000658	HUMAN RESOURCE CONSULTANT 4	1	0		119H	50000658	HUMAN RESOURCE CONSULTANT 4
71026806	HUMAN RESOURCE CONSULTANT 4	119H	50000658	HUMAN RESOURCE CONSULTANT 4	1	0		119H	50000658	HUMAN RESOURCE CONSULTANT 4
71026807	HUMAN RESOURCE CONSULTANT 4	119H	50000658	HUMAN RESOURCE CONSULTANT 4	1	0				
71026808	IT SPECIALIST 5	479M	50001668	IT SPECIALIST 5	1	0		479M	50001668	IT SPECIALIST 5
71026809	IT SPECIALIST 4	479L	50001666	IT SPECIALIST 4	1	0		479L	50001666	IT SPECIALIST 4
71026810	IT SPECIALIST 3	479K	50001664	IT SPECIALIST 3	1	0		119G	51000797	HUMAN RESOURCE CONSULTANT 3